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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/091,569	03/07/2002	Hironori Dobashi	P 290757 T4HT-01S1360-1	7976
909	7590	09/14/2005	EXAMINER	
PILLSBURY WINTHROP SHAW PITTMAN, LLP			KIM, CHONG R	
P.O. BOX 10500			ART UNIT	PAPER NUMBER
MCLEAN, VA 22102			2623	

DATE MAILED: 09/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/091,569	DOBASHI, HIRONORI
	Examiner Charles Kim	Art Unit 2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 02 May 2005.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1,3-6,8-11 and 13 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) 5,10 and 13 is/are allowed.
 6) Claim(s) 1,3,4,6,8,9 and 11 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 07 March 2002 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date _____.
 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date _____.
 5) Notice of Informal Patent Application (PTO-152)
 6) Other: _____.

DETAILED ACTION

Response to Amendment and Arguments

1. Applicant's amendment filed on May 2, 2005 has been entered and made of record.
2. Applicant's arguments have been fully considered, but they are not deemed to be persuasive for at least the following reasons.

Applicants argue (page 9) that their claimed invention (Claims 1, 2, 6, 7, 11, 12) differ from the prior art because, "While Atick discloses the storage of facial representations in a face templates memory, Atick does not disclose that a reference feature amount of a face is registered in correlation with ID information. Atick also does not disclose the claimed ID information acquiring section." The Examiner disagrees. Atick clearly discloses an ID information (name) acquiring section for obtaining and registering the ID information with the reference feature amount in column 9, line 60-column 10, line 11.

Applicants further argue (page 10) that, "Atick does not disclose the use of a predetermined reference value for determining whether or not additional registration should be performed." The Examiner disagrees. Atick clearly explains that the "threshold score" is use to determine whether or not the facial image is discarded or additionally registered (col. 12, lines 16-30).

Applicants further argue (page 10) that, "Atick also fails to disclose, teach or suggest the use of a predetermined reference value that is different from a predetermined threshold used for identification, as claimed." The Examiner disagrees. Although Atick does not explicitly state that the predetermined reference value is different from a predetermined threshold, Atick

explains that the predetermined reference value (threshold score) “might be the same” as the predetermined threshold required to identify the individual (col. 12, lines 22-24). This implies that the predetermined reference value could be different from the predetermined threshold. The Examiner notes that it was well known in the art that the standards for facial identification were different from the standards for registration. For example, the identification process determines similarity scores by comparing the input facial image data with stored facial image data, and determines a match if a score is greater than a predetermined threshold (col. 4, line 40-col. 5, line 24). Accordingly, the threshold for identification would have been higher than the threshold (reference value) for registration, in order to accurately identify the individual of the input facial image. Note that such accuracy is not required in the registration process. Therefore, it would have been obvious to provide a predetermined reference value that is different from the predetermined threshold. The suggestion/motivation for doing so would have been to enhance the accuracy of the facial identification process.

Applicants further argue (page 11) that their claimed invention (claim 6) differs from the prior art because “Atick does not disclose the claimed passage control section.” The Examiner disagrees. As noted in the previous office action (page 2), Atick discloses a computer access passage control section (col. 2, lines 13-18).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 6, 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Atick et al., U.S. Patent No. 6,111,517 ("Atick").

Referring to claim 1, Atick discloses a face image recognition apparatus comprising:

- a. a memory in which a reference feature amount of a face of a person is registered in correlation with ID (name) information (col. 9, line 60-col. 10, line 11 and col. 12, lines 1-7),
- b. an ID information acquiring section which acquires ID information from a person to be recognized (col. 9, line 60-col. 10, line 11),
- c. input section which inputs a face image of a person (col. 12, lines 8-13),
- d. feature amount extracting section which extracts feature amount (template) of a face based on the face image input by the image input section (col. 12, lines 14-19),
- e. recognition section that calculates similarity between the feature amount extracted by the feature amount extracting section and the reference feature amount of a face of a person corresponding to the ID information acquired by the ID information acquiring section, and which determines whether the person to be recognized is the person corresponding to the ID information by checking whether a calculated similarity is greater than a predetermined threshold used for identification (col. 9, line 60-col. 10, line 11 and col. 12, lines 14-34), and
- f. feature amount adding section which additionally registers the feature amount extracted by the feature amount extracting section as a reference feature amount of a second face corresponding to the ID information acquired by the ID information acquiring section, when the similarity calculated by the recognition section is lower than a predetermined reference value

used for additional registration (col. 9, line 60-col. 10, line 11 and col. 12, lines 14-34 and figure 9).

Atick does not explicitly disclose that the predetermined reference value used for additional registration is different from the predetermined threshold used for identification. However, it was well known in the art that the standards for facial identification were different from the standards for registration. For example, the identification process determines similarity scores by comparing the input facial image data with stored facial image data, and determines a match if a score is greater than a predetermined threshold (col. 4, line 40-col. 5, line 24). Accordingly, the threshold for identification would have been higher than the threshold (reference value) for registration, in order to accurately identify the individual of the input facial image. Note that such accuracy is not required in the registration process. Therefore, it would have been obvious to provide a predetermined reference value that is different from the predetermined threshold. The suggestion/motivation for doing so would have been to enhance the accuracy of the facial identification process.

Referring to claim 6, Atick discloses a (computer access) passage control apparatus which recognizes a face image of a passer and controls the passage of the passer (col. 2, lines 13-45), comprising:

- a. a memory in which a reference feature amount of a face of a person who is permitted to pass through is registered in correlation with ID information (col. 9, line 60-col. 10, line 11 and col. 12, lines 1-7),
- b. an ID information acquiring section which acquires ID information from a passer (col. 9, line 60-col. 10, line 11),

- c. an image input section which inputs a face image of the passer (col. 12, lines 8-13),
- d. a feature amount extracting section which extracts a feature amount of a face based on the face image of the passer input by the image input section (col. 12, lines 14-19),
- e. recognition section that calculates similarity between the feature amount extracted by the feature amount extracting section and the reference feature amount of a face of a person corresponding to the ID information acquired by the ID information acquiring section, and which determines whether the passer is the person corresponding to the ID information by checking whether a calculated similarity is greater than a predetermined threshold used for identification (col. 9, line 60-col. 10, line 11 and col. 12, lines 14-34),
- f. a passage control section which controls the (computer access) passage of the passer based on whether or not the passer is the person corresponding to the ID information (col. 9, line 60-col. 10, line 11 and col. 12, lines 35-43), and
- g. feature amount adding section which additionally registers the feature amount extracted by the feature amount extracting section as a reference feature amount of a second face corresponding to the ID information acquired by the ID information acquiring section, when the similarity calculated by the recognition section is lower than a predetermined reference value used for additional registration (col. 9, line 60-col. 10, line 11 and col. 12, lines 14-34 and figure 9).

Atick does not explicitly disclose that the predetermined reference value used for additional registration is different from the predetermined threshold used for identification. However, it was well known in the art that the standards for facial identification were different

from the standards for registration. For example, the identification process determines similarity scores by comparing the input facial image data with stored facial image data, and determines a match if a score is greater than a predetermined threshold (col. 4, line 40-col. 5, line 24).

Accordingly, the threshold for identification would have been higher than the threshold (reference value) for registration, in order to accurately identify the individual of the input facial image. Note that such accuracy is not required in the registration process. Therefore, it would have been obvious to provide a predetermined reference value that is different from the predetermined threshold. The suggestion/motivation for doing so would have been to enhance the accuracy of the facial identification process.

Referring to claim 11, see the rejection of at least claim 1 above.

4. Claims 3, 4, 8, 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Atick et al., U.S. Patent No. 6,111,517 (“Atick”) and Cusack et al., International Publication No. WO 00/10116 (“Cusack”).

Referring to claim 3, Atick further discloses a camera used to photograph a face image of a person (col. 3, line 61-col. 4, line 2) and an image input section that inputs face image photographed by the camera (figure 1), but does not explicitly disclose an illumination device used to apply light toward a face of a to-be-photographed person to be photographed by the camera. However, this feature was exceedingly well known in the art. For example, Cusack discloses a facial imaging system that comprises an illumination device used to apply light toward a face of a to-be-photographed person to be photographed by a camera (page 5, lines 6-27 and figure 1).

Atick and Cusack are combinable because they are both concerned with facial recognition systems. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the facial imaging system of Atick to include the illumination device of Cusack. The suggestion/motivation for doing so would have been to eliminate undesirable shadows during the facial imaging process, thereby providing high quality images for facial recognition (Cusack, page 3, line 28-page 4, line 5). Therefore, it would have been obvious to combine Atick with Cusack to obtain the invention as specified in claim 3.

Referring to claim 4, Cusack further discloses that the illumination device includes a first illuminating section which is disposed in an upper right position or upper left position of the camera in an oblique direction as viewed from the to-be-photographed person to apply light toward the face of the to-be-photographed person and a second illuminating section which is disposed below the camera to apply light toward the face of the to-be-photographed person (figure 4).

Referring to claim 8, see the rejection of at least claim 3 above.

Referring to claim 9, see the rejection of at least claim 4 above.

Allowable Subject Matter

5. Claims 5, 10, 13 are allowed.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

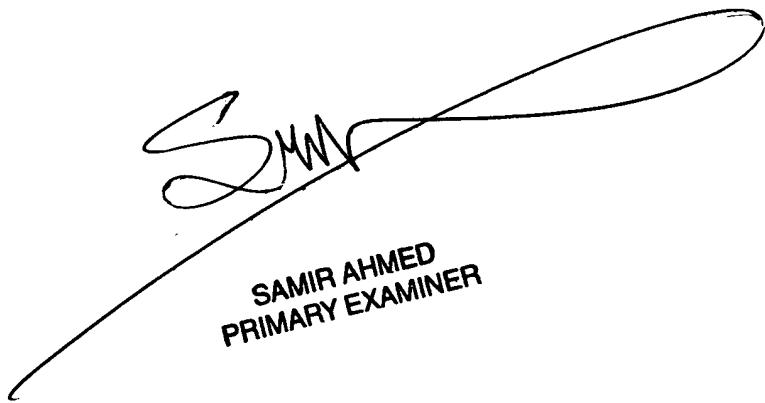
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles Kim whose telephone number is 571-272-7421. The examiner can normally be reached on Mon thru Thurs 8:30am to 6pm and alternating Fri 9:30am to 6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on 571-272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-272-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ak
ck

September 8, 2005



Samir Ahmed

SAMIR AHMED
PRIMARY EXAMINER